



*Amc*

RECEIVED

JUN 04 2003

TECH CENTER 1600/2900

SEQUENCE LISTING

<110> Hartmann, Gunther  
Bratzler, Robert L.  
Krieg, Arthur

<120> Methods Related to Immunostimulatory  
Nucleic Acid-Induced Interferon

<130> C1039/7044

<140> 09/672,126

<141> 2000-09-27

<150> 60/156,147

<151> 1999-09-29

<160> 169

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<221> misc\_feature

<222> (1)...(2)

<223> Backbone has phosphorothioate linkages.

<221> misc\_feature

<222> (3)...(14)

<223> Backbone has phosphodiester linkages.

<221> misc\_feature

<222> (15)...(19)

<223> Backbone has phosphorothioate linkages.

<221> misc\_feature

<222> (20)...(20)

<223> Backbone has phosphodiester linkages.

<400> 1

ggggtcaacg ttgagggggg

20

<210> 2

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

```

    <221> misc_feature
    <222> (1)...(24)
    <223> Backbone has phosphorothioate linkages.

    <400> 2
tcgtcgtttt gtcgttttgc cggt                                     24

    <210> 3
    <211> 20
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <221> misc_feature
    <222> (1)...(20)
    <223> Backbone has phosphorothioate linkages.

    <400> 3
ggggtcgtcg ttttgggggg                                           20

    <210> 4
    <211> 24
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <221> misc_feature
    <222> (1)...(24)
    <223> Backbone has phosphorothioate linkages.

    <400> 4
tcgtcgtttt gtcgttttgc gggg                                     24

    <210> 5
    <211> 20
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <221> misc_feature
    <222> (1)...(20)
    <223> Backbone has phosphorothioate linkages.

    <400> 5
ggggtcgacg tcgagggggg                                           20

    <210> 6
    <211> 20
    <212> DNA
    <213> Artificial Sequence

    <220>

```

```

    <223> Synthetic Oligonucleotide

    <221> misc_feature
    <222> (1)...(20)
    <223> Backbone has phosphorothioate linkages.

    <400> 6
gggggtcatcg atgagggggg                                     20

    <210> 7
    <211> 20
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <221> misc_feature
    <222> (1)...(2)
    <223> Backbone has phosphorothioate linkages.

    <221> misc_feature
    <222> (3)...(14)
    <223> Backbone has phosphodiester linkages.

    <221> misc_feature
    <222> (15)...(19)
    <223> Backbone has phosphorothioate linkages.

    <221> misc_feature
    <222> (20)...(20)
    <223> Backbone has phosphodiester linkages.

    <400> 7
ggggggacgat cgtcgggggg                                     20

    <210> 8
    <211> 20
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <221> misc_feature
    <222> (1)...(20)
    <223> Backbone has phosphorothioate linkages.

    <400> 8
ggggggtcgta cgacgggggg                                     20

    <210> 9
    <211> 22
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

```

```

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(16)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (17)...(21)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (22)...(22)
<223> Backbone has phosphodiester linkages.

<400> 9
gggggacgat atcgtcgggg gg
22

<210> 10
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(16)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (17)...(21)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (22)...(22)
<223> Backbone has phosphodiester linkages.

<400> 10
gggggacgac gtcgtcgggg gg
22

<210> 11
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

```

<221> misc\_feature  
 <222> (3)...(16)  
 <223> Backbone has phosphodiester linkages.  
  
 <221> misc\_feature  
 <222> (17)...(21)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (22)...(22)  
 <223> Backbone has phosphodiester linkages.

<400> 11  
 gggggacgag ctcgtcgggg gg

22

<210> 12  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <221> misc\_feature  
 <222> (1)...(2)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (3)...(14)  
 <223> Backbone has phosphodiester linkages.  
  
 <221> misc\_feature  
 <222> (15)...(19)  
  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (20)...(20)  
 <223> Backbone has phosphodiester linkages.

<400> 12  
 gggggacgta cgtcgggggg

20

<210> 13  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <221> misc\_feature  
 <222> (1)...(2)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (3)...(15)  
 <223> Backbone has phosphodiester linkages.

```

<221> misc_feature
<222> (16)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 13
gggggacgat cgttggggggg
20

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(15)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (16)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 14
ggggaacgat cgtcggggggg
20

<210> 15
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(15)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (16)...(20)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature

```

<222> (21)...(21)  
 <223> Backbone has phosphodiester linkages.  
  
 <400> 15  
 ggggggacga tcgtcggggg g 21  
  
 <210> 16  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <221> misc\_feature  
 <222> (1)...(2)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (3)...(15)  
 <223> Backbone has phosphodiester linkages.  
  
 <221> misc\_feature  
 <222> (16)...(20)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (21)...(21)  
 <223> Backbone has phosphodiester linkages.  
  
 <400> 16  
 gggggacgat cgtcgggggg g 21  
  
 <210> 17  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <221> misc\_feature  
 <222> (1)...(2)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (3)...(15)  
 <223> Backbone has phosphodiester linkages.  
  
 <221> misc\_feature  
 <222> (16)...(20)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (21)...(21)  
 <223> Backbone has phosphodiester linkages.  
  
 <400> 17  
 gggggtcatc gatgaggggg g 21

<210> 18  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <221> misc\_feature  
 <222> (1)...(2)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (3)...(14)  
 <223> Backbone has phosphodiester linkages.  
  
 <221> misc\_feature  
 <222> (15)...(19)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (20)...(20)  
 <223> Backbone has phosphodiester linkages.

<400> 18  
 ggggtcgtcg acgagggggg

20

<210> 19  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <221> misc\_feature  
 <222> (1)...(2)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (3)...(16)  
 <223> Backbone has phosphodiester linkages.  
  
 <221> misc\_feature  
 <222> (17)...(21)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (22)...(22)  
 <223> Backbone has phosphodiester linkages.

<400> 19  
 ggggtcgttc gaacgagggg gg

22

<210> 20  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence



```

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(16)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (17)...(21)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (22)...(22)
<223> Backbone has phosphodiester linkages.

<400> 20
ggggacgttc gaacgtgggg gg
22

<210> 21
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(16)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (17)...(21)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (22)...(22)
<223> Backbone has phosphodiester linkages.

<400> 21
ggggaacgac gtcgttgggg gg
22

<210> 22
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature

```

```

<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 22
ggggaacgta cgtcgggggg                                     20

<210> 23
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(18)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (19)...(23)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (24)...(24)
<223> Backbone has phosphodiester linkages.

<400> 23
ggggaacgta cgtacgttg gggg                                     24

<210> 24
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)

```

```

<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 24
ggggtcaccg gtgagggggg
20

<210> 25
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(18)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (19)...(23)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (24)...(24)
<223> Backbone has phosphodiester linkages.

<400> 25
ggggtcgacg tacgtcgagg gggg
24

<210> 26
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(16)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (17)...(21)
<223> Backbone has phosphorothioate linkages.

```

```

    <221> misc_feature
    <222> (22)...(22)
    <223> Backbone has phosphodiester linkages.

    <400> 26
ggggaccggt accggtgggg gg                                     22

    <210> 27
    <211> 19
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <221> misc_feature
    <222> (1)...(2)
    <223> Backbone has phosphorothioate linkages.

    <221> misc_feature
    <222> (3)...(13)
    <223> Backbone has phosphodiester linkages.

    <221> misc_feature
    <222> (14)...(18)
    <223> Backbone has phosphorothioate linkages.

    <221> misc_feature
    <222> (19)...(19)
    <223> Backbone has phosphodiester linkages.

    <400> 27
gggtcgacgt cgagggggg                                         19

    <210> 28
    <211> 18
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <221> misc_feature
    <222> (1)...(2)
    <223> Backbone has phosphorothioate linkages.

    <221> misc_feature
    <222> (3)...(13)
    <223> Backbone has phosphodiester linkages.

    <221> misc_feature
    <222> (14)...(18)
    <223> Backbone has phosphorothioate linkages.

    <400> 28
ggggtcgacg tcgagggg                                         18

    <210> 29

```

```

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(16)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (17)...(21)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (22)...(22)
<223> Backbone has phosphodiester linkages.

<400> 29
ggggaacggtt aacgttgggg gg
22

<210> 30
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(18)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (19)...(19)
<223> Backbone has phosphodiester linkages.

<400> 30
ggggacgtcg acgtggggg
19

<210> 31
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

```

```

<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 31
gggggtcggt cgttgggggg                                     20

<210> 32
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(13)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (14)...(18)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (19)...(19)
<223> Backbone has phosphodiester linkages.

<400> 32
gggacgatcg tcggggggg                                     19

<210> 33
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

```

<221> misc\_feature  
 <222> (3)...(13)  
 <223> Backbone has phosphodiester linkages.  
  
 <221> misc\_feature  
 <222> (14)...(19)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (20)...(20)  
 <223> Backbone has phosphodiester linkages.

<400> 33  
 gggtcgtcga cgagggggggg

20

<210> 34  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <221> misc\_feature  
 <222> (1)...(2)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (3)...(13)  
 <223> Backbone has phosphodiester linkages.  
  
 <221> misc\_feature  
 <222> (14)...(18)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (19)...(19)  
 <223> Backbone has phosphodiester linkages.

<400> 34  
 gggtcgtcgac gagggggggg

19

<210> 35  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <221> misc\_feature  
 <222> (1)...(2)  
 <223> Backbone has phosphorothioate linkages.  
  
 <221> misc\_feature  
 <222> (3)...(14)  
 <223> Backbone has phosphodiester linkages.

```

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 35
ggggacgatc gtcggggggg                                     20

<210> 36
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(21)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (22)...(26)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (27)...(27)
<223> Backbone has phosphodiester linkages.

<400> 36
ggggtcgacg tcgacgtcga gggggggg                                     27

<210> 37
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(15)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (16)...(20)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature

```



<222> (21)...(21)  
 <223> Backbone has phosphodiester linkages.

<400> 37  
 ggggacgacg tcgtgggggg g 21

<210> 38  
 <211> 8  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<400> 38  
 aacgttct 8

<210> 39  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<400> 39  
 accatggacg aactgtttcc cctc 24

<210> 40  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<400> 40  
 accatggacg acctgtttcc cctc 24

<210> 41  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<400> 41  
 accatggacg agctgtttcc cctc 24

<210> 42  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<400> 42

accatggacg atctgtttcc cctc	24
<210> 43 <211> 24 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 43	
accatggacg gtctgtttcc cctc	24
<210> 44 <211> 24 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 44	
accatggacg tactgtttcc cctc	24
<210> 45 <211> 24 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 45	
accatggacg ttctgtttcc cctc	24
<210> 46 <211> 18 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 46	
agctatgacg ttccaagg	18
<210> 47 <211> 20 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 47	
ataggaggtc caacgttctc	20
<210> 48 <211> 20	

<212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 48  
 atcgactctc gaacgttctc 20  
  
 <210> 49  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 49  
 atcgactctc gagcgttctc 20  
  
 <210> 50  
 <211> 17  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 50  
 atgacgttcc tgacgtt 17  
  
 <210> 51  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 51  
 atggaaggtc caacgttctc 20  
  
 <210> 52  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 52  
 atggaaggtc cagcgttctc 20  
  
 <210> 53  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>

<223> Synthetic Oligonucleotide	
<400> 53	
atggactctc cagcggttctc	20
<210> 54	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 54	
atggaggctc catcggttctc	20
<210> 55	
<211> 7	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 55	
caacggt	7
<210> 56	
<211> 15	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 56	
cacggttgagg ggcac	15
<210> 57	
<211> 8	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 57	
ccaacggt	8
<210> 58	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 58	

gagaacgatg gaccttccat	20
<210> 59 <211> 20 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 59	
gagaacgctc cagcactgat	20
<210> 60 <211> 20 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 60	
gagaacgctc gaccttccat	20
<210> 61 <211> 20 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 61	
gagaacgctc gaccttcgat	20
<210> 62 <211> 20 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 62	
gagaacgctg gaccttccat	20
<210> 63 <211> 15 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 63	
gcatgacgtt gagct	15
<210> 64 <211> 21	

<212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 64  
 gcgtgcgttg tcgttgcgt t 21  
  
 <210> 65  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 65  
 gctagacgtt agcgt 15  
  
 <210> 66  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 66  
 gctagacgtt agtgt 15  
  
 <210> 67  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 67  
 gctagatgtt agcgt 15  
  
 <210> 68  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 68  
 ggggtcaacg ttgacgggg 19  
  
 <210> 69  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>

<223> Synthetic Oligonucleotide	
<400> 69	
gggggtcagtc gtgacgggg	19
<210> 70	
<211> 6	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<221> misc_difference	
<222> (5)...(5)	
<223> y = t/u or c	
<400> 70	
gtcgyt	6
<210> 71	
<211> 8	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 71	
tcaacgtc	8
<210> 72	
<211> 8	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 72	
tcaacggt	8
<210> 73	
<211> 8	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 73	
tcagcgct	8
<210> 74	
<211> 12	
<212> DNA	
<213> Artificial Sequence	
<220>	

<223> Synthetic Oligonucleotide	
<400> 74	
tcagcgtgcg cc	12
<210> 75	
<211> 8	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 75	
tcatcgat	8
<210> 76	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 76	
tccacgacgt tttcgacgtt	20
<210> 77	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 77	
tccataacgt tcctgatgct	20
<210> 78	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 78	
tccatagcgt tcctagcgtt	20
<210> 79	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 79	
tccatcacgt gcctgatgct	20



<210> 80  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 80  
 tccatgacgg tcctgatgct 20  
  
 <210> 81  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 81  
 tccatgacgt ccctgatgct 20  
  
 <210> 82  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 82  
 tccatgacgt gcctgatgct 20  
  
 <210> 83  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 83  
 tccatgacgt tcctgacgtt 20  
  
 <210> 84  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 84  
 tccatgacgt tcctgatgct 20  
  
 <210> 85  
 <211> 20  
 <212> DNA

<213> Artificial Sequence  
 <220>  
 <223> Synthetic Oligonucleotide  
 <400> 85  
 tccatgccgg tctgatgct 20  
 <210> 86  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Synthetic Oligonucleotide  
 <400> 86  
 tccatgcgtg cgtgcgtttt 20  
 <210> 87  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Synthetic Oligonucleotide  
 <400> 87  
 tccatgcgtt gcgttcggtt 20  
 <210> 88  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Synthetic Oligonucleotide  
 <400> 88  
 tccatggcgg tctgatgct 20  
 <210> 89  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Synthetic Oligonucleotide  
 <400> 89  
 tccatgtcga tctgatgct 20  
 <210> 90  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Synthetic Oligonucleotide

<400> 90	
tccatgtcgc tctgatgct	20
<210> 91	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 91	
tccatgtcgg tctgacgca	20
<210> 92	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 92	
tccatgtcgg tctgatgct	20
<210> 93	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 93	
tccatgtcgg tctgtgat	20
<210> 94	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 94	
tccatgtcgt ccctgatgct	20
<210> 95	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 95	
tccatgtcgt tctgtcggt	20

<210> 96  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 96  
 tccatgtcgt ttttgtcggt 20  
  
 <210> 97  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 97  
 tcctgacgtt cctgacgtt 19  
  
 <210> 98  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 98  
 tcctgtcggt cctgtcggt 19  
  
 <210> 99  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 99  
 tcctgtcggt ccttgcgtt 20  
  
 <210> 100  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 100  
 tcctgtcggt ttttgtcggt 20  
  
 <210> 101  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 101  
 tccttgctgt tcctgctgtt 20  
  
 <210> 102  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide  
  
 <400> 102  
 tcgtcgtgt ccccccttct t 21  
  
 <210> 103  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 103  
 tcgtcgtgt ctgcccttct t 21  
  
 <210> 104  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 104  
 tcgtcgtgt tgcgttttct t 21  
  
 <210> 105  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 105  
 tcgtcgtgt cggt 14  
  
 <210> 106  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide

<p>&lt;400&gt; 106 tcgtcgttgt cgttgtcgtt</p>	20
<p>&lt;210&gt; 107 &lt;211&gt; 22 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt; &lt;223&gt; Synthetic Oligonucleotide</p>	
<p>&lt;400&gt; 107 tcgtcgttgt cgttttgtcg tt</p>	22
<p>&lt;210&gt; 108 &lt;211&gt; 24 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt; &lt;223&gt; Synthetic Oligonucleotide</p>	
<p>&lt;400&gt; 108 tcgtcgtttt gtcgttttgt cgtt</p>	24
<p>&lt;210&gt; 109 &lt;211&gt; 17 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt; &lt;223&gt; Synthetic Oligonucleotide</p>	
<p>&lt;400&gt; 109 tctcccagcg ggcgcat</p>	17
<p>&lt;210&gt; 110 &lt;211&gt; 18 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt; &lt;223&gt; Synthetic Oligonucleotide</p>	
<p>&lt;400&gt; 110 tctcccagcg tgcgccat</p>	18
<p>&lt;210&gt; 111 &lt;211&gt; 8 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt; &lt;223&gt; Synthetic Oligonucleotide</p>	
<p>&lt;400&gt; 111 tcttcgaa</p>	8
<p>&lt;210&gt; 112</p>	

<211> 8	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 112	
tcttcgat	8
<210> 113	
<211> 13	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 113	
tgtcggtgtc gtt	13
<210> 114	
<211> 19	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 114	
tgtcggtgtc gttgctgtt	19
<210> 115	
<211> 25	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 115	
tgtcggtgtc gttgctgttg tcgtt	25
<210> 116	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic Oligonucleotide	
<400> 116	
tgtcgtttgt cgtttgtcgt t	21
<210> 117	
<211> 7	
<212> DNA	
<213> Artificial Sequence	

```

    <220>
    <223> Synthetic Oligonucleotide

    <221> misc_difference
    <222> (6)...(6)
    <223> y = t/u or c

    <400> 117
tgtcgyt 7

    <210> 118
    <211> 20
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <400> 118
atggaaggtc caaggggctc 20

    <210> 119
    <211> 20
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <400> 119
atggaaggtc cagggggctc 20

    <210> 120
    <211> 20
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <400> 120
atggaaggtc cgggggttctc 20

    <210> 121
    <211> 20
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Synthetic Oligonucleotide

    <400> 121
atggactctc cgggggttctc 20

    <210> 122
    <211> 20
    <212> DNA
    <213> Artificial Sequence

```



<220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 122  
 atggactctg gagggggctc 20  
  
 <210> 123  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 123  
 atggactctg gaggggtctc 20  
  
 <210> 124  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 124  
 atggactctg ggggggttctc 20  
  
 <210> 125  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 125  
 atggaggctc catggggctc 20  
  
 <210> 126  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 126  
 gagaaggggc cagcactgat 20  
  
 <210> 127  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 127

gagaaggggg gaccttccat	20
<210> 128 <211> 20 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 128	
gagaaggggg gaccttggat	20
<210> 129 <211> 15 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 129	
gcatgagggg gagct	15
<210> 130 <211> 14 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 130	
gctagagggga gtgt	14
<210> 131 <211> 15 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 131	
gctagagggg aggggt	15
<210> 132 <211> 15 <212> DNA <213> Artificial Sequence  <220> <223> Synthetic Oligonucleotide  <400> 132	
gctagatgtt agggg	15
<210> 133 <211> 20	

<212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 133  
 gggggacgat cgtcgggggg 20  
  
 <210> 134  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 134  
 gggggggggg gggggggggg 20  
  
 <210> 135  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 135  
 ggggtcaacg ttgagggggg 20  
  
 <210> 136  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 136  
 ggggtcgacg tcgagggggg 20  
  
 <210> 137  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 137  
 tccatcgggg gcctgatgct 20  
  
 <210> 138  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>

<223> Synthetic Oligonucleotide

<400> 138  
tccatgaggg gcctgatgct 20

<210> 139  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 139  
tccatgcggg tggggatgct 20

<210> 140  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 140  
tccatggggg tcctgatgct 20

<210> 141  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 141  
tccatggggg ccctgatgct 20

<210> 142  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 142  
tccatggggg gcctgatgct 20

<210> 143  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 143  
tccatggggg tcctgatgct 20

<210> 144  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 144  
 tccatgtggg gcctgatgct 20  
  
 <210> 145  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 145  
 tccatgtggg gcctgctgat 20  
  
 <210> 146  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <400> 146  
 tccatgtggg tggggatgct 20  
  
 <210> 147  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <221> misc\_feature  
 <222> (1)...(24)  
 <223> Backbone has phosphorothioate linkages.  
  
 <400> 147  
 tcgtcgtttt gtcgttttgt cggt 24  
  
 <210> 148  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide  
  
 <221> misc\_feature  
 <222> (1)...(2)

```

<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(20)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (21)...(21)
<223> Backbone has phosphodiester linkages.

<221> misc_difference
<222> (2)...(2)
<223> m = a or c

<221> misc_difference
<222> (18)...(18)
<223> m = a or c

<400> 148
gmgggtcaacg ttgagggmgg:g                                     21

<210> 149
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 149
ggggagttcg ttgagggggg                                         20

<210> 150
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

```

```

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 150
gggggagcat gctcgggggg
20

<210> 151
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 151
ggggtcaagc ttgagggggg
20

<210> 152
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(20)
<223> Backbone has phosphorothioate linkages.

```

<p>&lt;400&gt; 152  ggggacgtcg acgtgggggg</p> <p>&lt;210&gt; 153  &lt;211&gt; 22  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p> <p>&lt;220&gt;  &lt;223&gt; Synthetic Oligonucleotide</p> <p>&lt;221&gt; misc_feature  &lt;222&gt; (1)...(22)  &lt;223&gt; Backbone has phosphorothioate linkages.</p>	20
<p>&lt;400&gt; 153  ggggtcgttc gaacgagggg gg</p> <p>&lt;210&gt; 154  &lt;211&gt; 22  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p> <p>&lt;220&gt;  &lt;223&gt; Synthetic Oligonucleotide</p> <p>&lt;221&gt; misc_feature  &lt;222&gt; (1)...(22)  &lt;223&gt; Backbone has phosphorothioate linkages.</p>	22
<p>&lt;400&gt; 154  ggggacgttc gaacgtgggg gg</p> <p>&lt;210&gt; 155  &lt;211&gt; 20  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p> <p>&lt;220&gt;  &lt;223&gt; Synthetic Oligonucleotide</p> <p>&lt;221&gt; misc_feature  &lt;222&gt; (1)...(2)  &lt;223&gt; Backbone has phosphorothioate linkages.</p> <p>&lt;221&gt; misc_feature  &lt;222&gt; (3)...(14)  &lt;223&gt; Backbone has phosphodiester linkages.</p> <p>&lt;221&gt; misc_feature  &lt;222&gt; (15)...(19)  &lt;223&gt; Backbone has phosphorothioate linkages.</p> <p>&lt;221&gt; misc_feature  &lt;222&gt; (20)...(20)  &lt;223&gt; Backbone has phosphorothioate linkages.</p>	22
<p>&lt;400&gt; 155  gggggagcat gctggggggg</p>	20



```

<210> 156
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(15)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (16)...(20)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (21)...(21)
<223> Backbone has phosphodiester linkages.

<400> 156
gggggtcaac gttgaggggg g
21

<210> 157
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 157
gggggatgat tggttgggggg
20

<210> 158
<211> 20
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<221> modified_base
<222> (7)...(7)
<223> n = 5- methylcytidine

<221> modified_base
<222> (10)...(10)
<223> n = 5-methylcytidine

<400> 158
gggggangan tgttggggg                                     20

<210> 159
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 159
gggggagcta gcttggggg                                     20

<210> 160

```

```

<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 160
gggtcgtcgt cgtggggggg
20

<210> 161
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 161
ggggacgtcg tcgtgggggg
20

<210> 162
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

```

```

<223> Synthetic Oligonucleotide

<221> misc_feature
<222> (1)...(2)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (3)...(14)
<223> Backbone has phosphodiester linkages.

<221> misc_feature
<222> (15)...(19)
<223> Backbone has phosphorothioate linkages.

<221> misc_feature
<222> (20)...(20)
<223> Backbone has phosphodiester linkages.

<400> 162
ggggaaccgc ggttggggg                                     20

<210> 163
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<400> 163
accgatgacg tcgccggtga cggcaccacg acggccaccg tgctg       45

<210> 164
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<400> 164
accgatgacg tcgccggtga cggcaccacg                               30

<210> 165
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide

<400> 165
gggggggggg ggaacgttgg gggggggggg                             30

<210> 166
<211> 9
<212> PRT
<213> Artificial Sequence

```

<220>  
 <223> Synthetic Peptide  
 <400> 166  
 Gly Ile Leu Gly Phe Val Phe Thr Leu  
 1 5

<210> 167  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Peptide  
 <400> 167  
 Glu Leu Ala Gly Ile Gly Ile Leu Thr Val  
 1 5 10

<210> 168  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<220>  
 <221> misc\_feature  
 <222> (4)..(23)  
 <223> Each n is any nucleotide and optionally may be missing.

<400> 168  
 gggnnnnnnnn nnnnnnnnnn nnnggg

26

<210> 169  
 <211> 49  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<220>  
 <221> misc\_feature  
 <222> (4)..(23)  
 <223> Each n is any nucleotide and optionally may be missing.

<220>  
 <221> misc\_feature  
 <222> (27)..(46)  
 <223> Each n is any nucleotide and optionally may be missing.

<400> 169  
 gggnnnnnnnn nnnnnnnnnn nnngggnnnn nnnnnnnnnn nnnnnnggg

49